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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,196	06/14/2006	Kurt Brunner	63572A	7713

109 7590 09/04/2007

THE DOW CHEMICAL COMPANY
INTELLECTUAL PROPERTY SECTION, P. O. BOX 1967
MIDLAND, MI 48641-1967

EXAMINER	
VO, HAI	

ART UNIT	PAPER NUMBER
1771	

MAIL DATE	DELIVERY MODE
09/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/583,196	BRUNNER ET AL.	
	Examiner	Art Unit	
	Hai Vo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *14 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 12-18* is/are rejected.

7)☒ Claim(s) *6-11 and 19-24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Objections

1. Claims 6-11, and 19-24 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim depends from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 6-11, and 19-24 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-5, and 12-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2001-226509. JP'509 teaches a multilayer sheet comprising a polypropylene foamed layer and at least one polypropylene resin layer on a surface of the foamed sheet (abstract). The foamed layer has a thickness from 1 to 3 mm. The foam layer has a surface weight of 175 to 425 g/m2. The multilayer sheet has a surface weight of at most 500 g/m2. The polypropylene resin layer is about 10 to 250 microns thick (paragraph 45).

Likewise, the thickness of the multilayer sheet overlaps with the claimed range. The polypropylene resin layer includes a copolymer of propylene and 1-butene (paragraph 35). The polypropylene resin layer contains up to 5% by weight of filler (paragraphs 43 and 44). The multilayer sheet comprises a ridge (paragraph 50). JP'509 does not specifically disclose $S \geq 2x10^{-7} G^{3.1872}$ and $S=(Sm\ Sc)^{0.5}$, wherein G is the surface weight of the multilayer sheet expressed in g/m2; S is the geometric bending moment, Sm the maximum bending moment in the plane of the multilayer sheet and Sc the bending moment in the direction perpendicular to the plane direction of the multilayer sheet. However, it appears that the multilayer sheet meets all the structural limitations and chemistry as required by the claims; therefore, it is the examiner's position that such relationships would be inherently present as like material has like property. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. The same token is applied to the average bending force and maximum sheet curl. Accordingly, JP'509 anticipates or strongly suggests the claimed subject matter.

5. Claims 1, 2, 5, 12, 14, 15 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wu et al (US 2002/0035164). Wu teaches a multilayer sheet comprising a polypropylene foamed layer and at least one polypropylene resin layer on a surface of the foamed sheet (paragraph 57). Polypropylene can be a substantially linear polypropylene

homopolymer or a copolymer of propylene and a minor amount up to 30 wt% of an alpha-olefin (paragraph 20). The multilayer sheet has a thickness from 0.5 to 2 mm (paragraph 56). As the polypropylene resin layer is much thinner than the foam layer, the thickness of the multilayer sheet is approximately the same as the thickness of the foam layer. The polypropylene resin layer contains up to 5% by weight of filler (paragraphs 30 and 57). As the thickness is directly proportional to the surface weight, it is not seen that the surface weight could be outside the claimed range as the thickness is within the claimed range. Wu does not specifically disclose $S \geq 2x10^{-7} G^{3.1872}$ and $S=(Sm\ Sc)^{0.5}$, wherein G is the surface weight of the multilayer sheet expressed in g/m2; S is the geometric bending moment, Sm the maximum bending moment in the plane of the multilayer sheet and Sc the bending moment in the direction perpendicular to the plane direction of the multilayer sheet. However, it appears that the multilayer sheet meets all the structural limitations and chemistry as required by the claims; therefore, it is the examiner's position that such relationships would be inherently present as like material has like property. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. The same token is applied to the average bending force and maximum sheet curl. Accordingly, Wu anticipates or strongly suggests the claimed subject matter.

6. Claims 3, 4, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al (US 2002/0035164) in view of JP 2001-226509. Wu does not teach the multilayer sheet comprising a crease. JP'509 teaches the packaging material including a ridge (paragraph 50). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the packaging material of Lin with a crease such is known in the packaging material art and JP'509 provides necessary details to practice the invention of Wu.
7. Claims 1-5, and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (US 6,364,988) in view of JP 2001-226509. Lin teaches a multilayer sheet comprising a polypropylene foamed layer and at least one polypropylene resin layer on a surface of the foamed sheet (abstract). The multilayer sheet has a thickness of 250 microns (column 6, lines 50 et seq.). The foam layer has a thickness about 8 times the thickness of the non-foamed layer. The polypropylene resin layer contains up to 40% by weight of filler (claim 1). As the thickness is directly proportional to the surface weight, it is not seen that the surface weight could be outside the claimed range as the thickness is within the claimed range. Lin does not teach the resin layer comprising a polymer including units derives from an 1-alkene monomer. JP'509 teaches a multilayer sheet comprising a polypropylene foamed layer and at least one polypropylene resin layer on a surface of the foamed sheet (abstract). The polypropylene resin layer includes a copolymer of propylene and 1-butene (paragraph 35). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the resin layer comprising an 1-

alkene monomer because a polypropylene homopolymer and propylene copolymer with an alpha-olefin monomer have been shown in the art to be recognized equivalent polymers for the resin layer forming the packaging material.

Lin does not teach the packaging material comprising a crease. JP'509 teaches the packaging material including a ridge (paragraph 50). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the packaging material of Lin with a crease such is known in the packaging material art and JP'509 provides necessary details to practice the invention of Lin.

Lin as modified by JP'509 does not specifically disclose $S \geq 2x10^{-7} G^{3.1872}$ and $S=(Sm\ Sc)^{0.5}$, wherein G is the surface weight of the multilayer sheet expressed in g/m2; S is the geometric bending moment, Sm the maximum bending moment in the plane of the multilayer sheet and Sc the bending moment in the direction perpendicular to the plane direction of the multilayer sheet. However, it appears that the resulting multilayer sheet meets all the structural limitations and chemistry as required by the claims; therefore, it is the examiner's position that such relationships would be inherently present as like material has like property. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. The same token is applied to the average bending force and maximum sheet curl.

8. ` The examiner disagrees with the citation "X" set forth in the International Search Report filed 06/14/2006. EP 353 496 teaches a packaging material comprising a foamed layer sandwiched between two non-foamed layers. The foamed layer and non-foamed layer are made from a propylene based polymer which is a polypropylene homopolymer or a propylene ethylene copolymer (column 4, lines 37-47). EP 353 496 makes clear that the propylene ethylene copolymer is preferable in because it is found to withstand folding and bending operations without cracking at low temperatures which normally occur during the conversion of the packing material into and filling of the fold packing containers with milk. Since ethylene itself is not 1-alkene monomer, EP 353 496 does not teach the non-foamed layer containing a polymer with the 1-alkene monomer. Accordingly, the claims could not be rejected over EP 353 496 taken individually.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HV

/Hai Vo/
Primary Examiner, Art Unit 1771